



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

*[Handwritten signature]*

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,838	10/08/2003	Jianhui Hong	31715-00058	7126
24919	7590	07/23/2004		
MCAFEE & TAFT TENTH FLOOR, TWO LEADERSHIP SQUARE 211 NORTH ROBINSON OKLAHOMA CITY, OK 73102				EXAMINER COCKS, JOSIAH C
				ART UNIT 3749 PAPER NUMBER

DATE MAILED: 07/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/681,838	HONG ET AL.
	Examiner	Art Unit
	Josiah Cocks	3749

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) Responsive to communication(s) filed on 28 June 2004.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) Claim(s) 1-8 and 10-25 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-8 and 10-25 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### *Response to Amendment*

1. Receipt of applicant's response filed 6/28/2004 is acknowledged. Applicant presents arguments as to the patentability of applicant's claims over the prior art of record. These arguments are addressed in the Response to Arguments section below. The examiner notes that in the prior Office Action mailed 6/10/2004 claims 4-7, 15, 16, and 18-21 were not addressed in the body of the action. These claims are now addressed below. Additionally, review of prior U.S. Patent No. 6,702,572 has presented issues of double patenting, which are addressed below. Accordingly, the finality of the Office Action mailed 6/10/2004 is hereby withdrawn. Because, the double patenting rejections were not previously raised this action is made non-final.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

Art Unit: 3749

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 8, 10-14, 17, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Schwartz et al.* (US # 5,813,849) (cited in IDS filed 10/8/2003) in view of *Altemark et al.* (US # 5,055,032) (cited in IDS filed 10/8/2003).

*Schwartz et al.* discloses in Figures 1-12 a flare pilot (26) for igniting flammable fluids from a flare stack (10) and method of igniting these fluids substantially as described in applicant's claims 1, 8, 10-14, 17, and 25 including a fuel-air mixture inlet pipe (28), a fuel-air mixture discharge nozzle (42) connected to the fuel-air mixture inlet pipe, wherein a cylindrical wind shield (40) is provided that is attached to the nozzle, and a plurality of openings in each of the opposite sides of the wind shield (see col. 4, lines 32-41). *Schwartz et al.* further includes a flame front ignition means (36), a flame detector (38), and a sound detector connected to the pipe at a remote location for detecting sound (see col. 5, lines 21-54).

*Schwartz et al.* possibly does not disclose a perforated flame stabilizer positioned within the wind-shield and surrounding the fuel-air nozzle.

*Altemark et al.* teaches a burner having a burner nozzle (20) that is surrounded by a perforated flame stabilizer/retention device (3) within an outer tube (23).

Therefore, in regard to claims 1, 8, 10-14, 17, and 25, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the flare pilot of *Schwartz et al.* to incorporate the flame stabilizer/retention device of *Altemark et al.* as this flame

retention device is desirable in providing for very favorable stable combustion and keeping noise and pollutant emissions very low (see *Altemark et al.*, col. 5, lines 24-36),

5. Claims 2, 3, 22, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Schwartz et al.* in view of *Altemark et al.* as applied to claims 1 and 17 above and further in view of *Sneed* (US # 4,128,393) (cited in IDS filed 10/8/2003).

*Schwartz et al.* in view of *Altemark* teach all the limitations of claims except that the wind shield has an upstanding wall portion with downwardly oriented openings for discharging rain and wind.

*Sneed* teaches a wind-shielding device (5) for a burner nozzle (3) wherein the wind shielding device is arranged as an upstanding wall having a plurality of downwardly facing openings (6) (see Fig. 2).

Therefore, in regard to claims 2, 3, 22, 23, and 24 it would have been obvious to modify the wind shield of *Schwartz et al.* to incorporate the upstanding wall and openings of *Sneed* as this arrangement allows for protection of the flame formed at the nozzle from wind gusts, and allowing enough air to the nozzle to provide for proper combustion (see *Sneed*, col. 2, lines 40-53) with openings arranged such that the flow of air is diffused away from direct impingement on the flame (see *Sneed*, col. 2, lines 53-64).

#### ***Double Patenting***

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or

Art Unit: 3749

improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1, 4, 17, and 18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 12 and 37 of U.S. Patent No. 6,702,572. Although the conflicting claims are not identical, they are not patentably distinct from each other because, through the claims 1, 4, 17, and 18 of this application are broader in scope, they are claiming the same invention as claims 12 and 37 of U.S. Patent No. 6,702,572.

8. Claims 2, 3, 5-8, 10-16, and 19-25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11, 13-36, and 38-44 of

Art Unit: 3749

U.S. Patent No. 6,702,572 in view of *Altemark et al.* (US # 5,055,032) (cited in IDS filed 10/8/2003).

Although the conflicting claims are not identical, they are not patentably distinct from each other because, claims 2-8, 10-16, and 18-25 are broader in scope than claims 1-11, 13-36, and 38-44 except for the recitation of a flame stabilizer.

*Altemark et al.* teaches a burner having a burner nozzle (20) that is surrounded by a perforated flame stabilizer/retention device (3) within an outer tube (23).

Therefore, in regard to claims 2, 3, 5-8, 10-16, and 19-25, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the flare pilot of claims 1-11, 13-36, and 38-44 of U.S. No. 6,702,572 to incorporate the flame stabilizer/retention device of *Altemark et al.* as this flame retention device is desirable in providing for very favorable stable combustion and keeping noise and pollutant emissions very low (see *Altemark et al.*, col. 5, lines 24-36).

#### ***Response to Arguments***

9. Applicant's arguments filed 6/28/2004 have been fully considered but they are not persuasive. Applicant first argues that the flame stabilizer of *Altemark et al.* is structurally distinct from that claimed by applicant (see page 7 of the response). The examiner notes that the structural distinctions that applicant is asserting are present are not claimed. The flame stabilizer as claimed is met by *Altemark et al.*

Applicant also argues that a person of ordinary skill in the art would not be prompted to combine features of a combustion burner, such as *Altemark et al.*, with a pilot burner for a flare

Art Unit: 3749

stack. However, the examiner considers that *Altemark et al.* and *Schwartz et al.* may reasonably be considered analogous art. In support of this assertion, the examiner notes that both references are classified in the combustion class 431. Further, a person of ordinary skill in the art would reasonably be prompted to modify a flare pilot, such as that of Schwartz et al., to incorporate a flame stabilizing device that desirably functions to promote stable combustion and keeps noise and pollutant emissions very low (see *Altemark et al.*, col. 5, lines 24-36).

Applicant also argues that the *Sneed* reference does not show an upstanding wall portion with a plurality of downwardly facing openings that function to discharge wind and rain from inside the wind shield. In response to argument, the examiner notes that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). The examiner considers that the openings of *Sneed* would be capable of discharging wind and rain from the inside of the wind shield. As far as is proper, the examiner does not consider applicant's claims to structurally define an upstanding wall portion distinct from that of *Sneed*.

#### ***Allowable Subject Matter***

10. Claims 4-7, 15, 16, and 18-21 are considered to contain allowable subject matter. These claims would be allowable if rewritten in independent form including all of the limitations of the

Art Unit: 3749

base claim and any intervening claims and upon the filing of a terminal disclaimer as noted above.

***Conclusion***

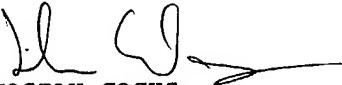
11. This action is made non-final. A THREE month shortened statutory period for reply has been set. Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) months from the mailing date of this communication.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Josiah Cocks whose telephone number is (703) 305-0450. The examiner can normally be reached on weekdays from 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus, can be reached at (703) 308-1935. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

jcc  
July 15, 2004



JOSIAH COCKS  
PRIMARY EXAMINER  
ART UNIT 3749